



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,371	10/26/2004	David Anthony Troman	11033-066US1	3108
26161	7590	04/14/2006	EXAMINER	
FISH & RICHARDSON PC			GHATT, DAVE A	
P.O. BOX 1022			ART UNIT	
MINNEAPOLIS, MN 55440-1022			PAPER NUMBER	
			2854	

DATE MAILED: 04/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary	Application No. 10/501,371	Applicant(s) TROMAN, DAVID ANTHONY	
	Examiner Dave A. Ghatt	Art Unit 2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS; WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13 and 16 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/14/04, 8/4/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 14 is rejected under 35 U.S.C. 102(b) as being anticipated by Shimizu (US 5,074,685). Insofar as structure is recited, Shimizu teaches the claimed apparatus. As shown in Figure 1, Shimizu teaches a printing apparatus including a carrier ribbon supply spool (in cassette 14) and a carrier ribbon take-up spool (in cassette 14) and a print head 2 having a plurality of heating elements, which are individually addressable and energisable selectively to remove pixels of marking medium from the carrier ribbon during a printing operation. As shown in Figures 5 and 6, and as outlined in the abstract, the print head 2 is movable towards the adjacent carrier ribbon and substrate during printing to urge the carrier ribbon towards the substrate, and the print head 2 is moved away from the carrier ribbon and substrate after printing, and wherein the print head 2 movement towards and away from the carrier ribbon is achieved as the print head 2 is moved by the first motor. See column 2 lines 10-18. As shown in Figures 5 and 6, Shimizu teaches a mechanical guide means including a cam (50, 52) carried by the print head. Shimizu also teaches a track 48 provided on a base relative to which the print head, in use, moves.

Allowable Subject Matter

3. Claims 1-13 and 16 are allowed.

Claim 1 has been allowed because the prior art of record does not teach or render obvious the total combination claimed, including a first motor which when the printing apparatus is operated in a first configuration, moves the print head during a printing operation relative to the substrate, and when the apparatus is operated in a second configuration, the first motor moving the carrier ribbon relative to the print head during a printing operation, and there being a second motor which is operative when the printing apparatus is operated in the first and second configurations to advance the carrier ribbon, the printing apparatus being configurable to either of the first and second configurations.

Claim 10 has been allowed because the prior art of record does not teach or render obvious the total combination claimed, including a first motor to move the carrier ribbon relative to the print head during a printing operation, and a second motor to advance carrier ribbon, wherein the carrier ribbon is moved past the print head inbetween printing operations to advance used ribbon onto the take-up spool in a direction opposite to the direction the ribbon is moved during a printing operation, and inbetween printing operations, a carrier ribbon length is advanced past the print head generally equal to the length of carrier ribbon used in the preceding printing operation plus the length of carrier ribbon to be used for the next printing operation.

Claim 12 has been allowed because the prior art of record does not teach or render obvious the total combination claimed, wherein in a first mode of operation when the substrate moves relative to the print head during a printing operation in a first direction, the carrier ribbon moves in the same direction as the substrate, and in a second mode of operation when the

Art Unit: 2854

substrate moves relative to the print head during a printing operation in a second direction, the carrier ribbon moves in the same direction as the substrate, and in the first mode of operation where the substrate moves in the first direction during a printing operation, inbetween printing operations, a length of the carrier ribbon is advanced past the print head, which is generally equal to the length of carrier ribbon used in the preceding printing operation plus the length of carrier ribbon to be used for the next printing operation.

Claim 16 has been allowed because the prior art of record does not teach or render obvious the total method claimed, wherein the method includes moving the substrate relative to the print head during a printing operation in a first direction, and moving the carrier ribbon in the same direction as the substrate and moving the carrier ribbon inbetween printing operations in a second opposite direction, the method including, inbetween printing operations, advancing a length of the carrier ribbon past the print head, which is generally equal to the length of carrier ribbon used in the preceding printing operation plus the length of carrier ribbon to be used for the next printing operation.

Conclusion

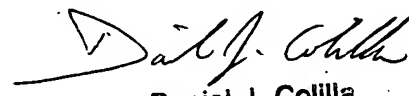
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave A. Ghatt whose telephone number is (571) 272-2165. The examiner can normally be reached on Mondays through Friday 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew H. Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2854

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DAG



Daniel J. Colilla
Primary Examiner
Art Unit 2854